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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,976	09/09/2003	Kuldipsingh A. Pabla	5681-08300	4139

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EXAMINER	
HOANG, HIEU T	
ART UNIT	**PAPER NUMBER**
2152	

MAIL DATE	DELIVERY MODE
09/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/657,976	PABLA ET AL.	
	Examiner	Art Unit	
	Hieu T. Hoang	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 September 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09/09/2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to the amendment filed on 09/10/2007.

2. Claims 1-35 are pending and presented for examination.

Response to Amendment

3. The objection of claim 1 has been withdrawn due to the amendment.

4. The 35 U.S.C. 101 rejection of claims 28-35 has been withdrawn due to the amendment.

5. The 35 U.S.C. 112 rejection of claims 1, 20 and 28 has been withdrawn due to the amendment.

Response to Arguments

6. Applicant's arguments on U.S.C. 102 rejection have been fully considered but they are not persuasive. The main argument is on pages 16-17 of the Remarks wherein the applicant argues that the prior art is not directed at caching, advertising and distributing content on a network, particularly, "wherein each advertisement corresponds to one of the one or more contents cached on the peer node", "request content corresponding to the discovered advertisements in accordance with the information included in the advertisements", and "cache the content and become a content publisher peer node for the content corresponding to the discovered advertisement". The examiner respectfully traverses the argument. Fig. 2, [0007], [0056] of Saulpaugh discloses that each peer has a client application software layer that utilizes the

Topology and Routing layer to send and receives messages for any desired purposes using various kinds of applications, including distributed data storage, file sharing, distributed processing, and messaging. Given its broadest reasonable interpretation, content can mean application data. In that sense, Saulpaugh disclose a role is a unique identifier used to identify application data or resources—which can be, e.g., a file that needs to be shared using a P2P file sharing application ([0068], client application software creates roles, [0069], a role address is associated with an application and a protocol). A peer node can publish a role (e.g. a file segment it cached for a file sharing application, [0084]-[0089], [0097], e.g. P2P file sharing protocol and application). In response to role publishing or advertisement, a requesting node (one that receives advertisements) may send a request for a role ([0082]) and may receive responses from advertising nodes that have the roles; the response may include data ([0063])—reading on "wherein each advertisement corresponds to one of the one or more contents cached on the peer node", "request content corresponding to the discovered advertisements in accordance with the information included in the advertisements", and "cache the content and become a content publisher peer node for the content corresponding to the discovered advertisement."

7. Argument on user-requestable contents is moot in view of the rationale above. Saulpaugh further discloses requesting a role through a client application API ([0078], [0082])

8. Arguments on U.S.C. 103 rejection are moot in view of new ground(s) of rejection.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1, 4, 12, 15, 20, 24, 25, 28, 32 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Saulpaugh et al. (US 2004/0122903, hereafter Saulpaugh).

11. For claim 1, Saulpaugh discloses a system, comprising: a network; a plurality of peer nodes coupled to the network (fig. 1, peers in a peer-to-peer network);

- at least one of the plurality of peer nodes configured as a publisher peer node for one or more contents cached on the peer node, wherein each publisher peer node is configured to publish one or more advertisements on the network ([0085], [0074], a node publishing a role, which contains instances associated with the node and also routing information that allows messages to be routed from the

node to remote role instances associated with other nodes), wherein each advertisement corresponds to one of the one or more contents cached on the peer node ([0056], [0069], client application software (such as distributed data storage) utilize role based addressing to publish application data or content that it has), and wherein each advertisement includes information for requesting a corresponding content ([0086], for each node that receives the publish message, an edge may be created that maps upon the link over which the publish message was received); and

- at least a subset of the plurality of peer nodes each configured to discover published advertisements on the network ([0089], nodes that receive the publish or broadcast); and request content corresponding to the discovered advertisements in accordance with the information included in the advertisements ([0082], request a role using, e.g., received role ID);
- wherein a publisher peer node that caches a content corresponding to a discovered advertisement is configured to provide the content corresponding to the discovered advertisement to another one of the a requesting peer node ([0069], protocol ID in the role determines which client application or content advertised, [0063], response message may include application (or protocol) data that has been advertised) in response to a request for the content from the requesting peer node ([0082]); and
- wherein the requesting peer node is configured to cache the content and become a content publisher peer node for the content corresponding to the discovered

advertisement ([0086], [0087], forward a published role to other nodes, fig. 6-8, role instance or content is published from a original node to other nodes).

12. For claim 12, Saulpaugh discloses a system, comprising:

a primary content publisher peer node configured to cache user-requestable contents and publish the cached contents for access by other peer nodes on a network ([0086], a original node publishes a role instance by broadcasting to other nodes, [0078], [0082], request a role through a client application API);

an edge content publisher peer node ([0086]) configured to:

- receive the user-requestable content from the primary content publisher peer node ([0086], an edge is may be created that maps upon the link over which the publish message was received);
- cache the received contents ([0063], [0069], response with data to be utilized by an application identified by a protocol ID); and
- publish the received contents for access by the other peer nodes on the network ([0074], [0086], role instances can be broadcasted to other nodes or edge nodes which will receive and publish the broadcast message to other further nodes).

13. For claim 20, Saulpaugh discloses a method, comprising:

- a content publisher peer node caching user requestable content and publishing the cached user requestable contents for access by other peer nodes on a network ([0086], a peer node publishing a role, [0069], role address identifies

associated application instance, [0078] and [0082], API for user requesting published role);

- one of the other peer nodes requesting a particular content on the network in response to a user request for the particular content ([0082], request for a role); receiving the particular content from the content publisher peer node; caching the received particular content; and publishing the received particular content for access by the other peer nodes on the network ([0074], [0086], role instances can be broadcasted to other nodes or edge nodes which will receive and publish the broadcast message to other nodes).

14. For claim 28, the claim is rejected for the same rationale as in claim 20.

15. For claim 4, Saulpaugh further discloses wherein the at least a subset of the plurality of peer nodes are each configured to: send a request for the particular content on the network; receive a portion of the particular content from the first content publisher peer node in response to the request; and receive another portion of the particular content from a second content publisher peer node that also caches the particular content in response to the request ([0187], fig. 75, a content portion is an instance of a role that can be received from any nodes that hosts that instance, [0076], a portion of content can be retrieved at one node, other portions from other nodes).

16. For claim 15, Saulpaugh further discloses an edge peer node configured to: send a request for particular content on the network in response to a user request for the particular content; receive a portion of the particular content from the primary content publisher peer node in response to the request; receive a redirection to the edge content publisher peer node from the primary content publisher peer node; and receive another portion of the particular content from the edge content publisher peer node in response to the redirection ([0076], a peer that receives a query for instances of a role may host one or more instances and know redirecting routes to remaining instances; so it responses to the query by returning the instances that it hosts together with routing information to other edges that host the remaining instances of that role).

17. For claims 24 and 32, the claims are rejected for the same rationale as in claim 15.

18. For claims 25 and 33, Saulpaugh further discloses the content publisher peer node is a primary publisher of the particular content, and wherein the one of the other peer nodes is an edge publisher of the particular content ([0074], [0086], a primary publisher is a peer that originates the publishing of the instances, an edge publisher is a peer that receives the instances advertised by the primary publisher and itself publishes the instances to other peers).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

20. Claims 2, 3, 5, 13, 14, 21-23, and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saulpaugh as applied to claims 1, 12, 20 and 28 above, and further in view of Marmor et al. (US 2002/0062310, hereafter Marmor), further in view of Leber et al. (US 2003/0233455, hereafter Leber).

21. For claim 2, Saulpaugh discloses the invention as in claim 1. Saulpaugh further discloses the plurality of peer nodes comprises an edge peer node ([0075], edge peer nodes pointing to other nodes via which the query message can be sent for a respective role instance) configured to:

Saulpaugh does not explicitly disclose:

- discover two or more advertisements published by two or more content publisher peer nodes to advertise a particular content cached on each of the two or more content publisher peer nodes;

However, Marmor discloses:

- discover two or more advertisements published by two or more content publisher peer nodes to advertise a particular content cached on each of the two or more content publisher peer nodes (fig. 4, fig. 5, [0013], [0046], a peer node requesting for service (instance) can get responses from two or more peer nodes that have the service (instances));

Saulpaugh-Marmor does not disclose:

- determine one of the two or more content publisher peer nodes as logically nearest on the network, wherein a logically nearest peer node is a peer node to which communications over the network take the least time; and
- request the particular content from the logically nearest content publisher peer node in accordance with the advertisement corresponding to the logically nearest content publisher peer node.

However, Leber discloses the same (abstract, [0005], [0045] last 5 lines, a peer node probes for actual quality of service (QoS) characteristics (delay, bandwidth, packet loss) to each peer that advertises the role and select peers with best QoS qualifications for setting up service)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Saulpaugh, Marmor and Leber in order to provide peer-to-peer services from the peer where the service is available with best QoS in order to save unnecessary long distance communications costs.

22. For claim 3, Saulpaugh-Marmor-Leber discloses the invention as in claim 2. Saulpaugh-Marmor-Leber further discloses the at least a subset of the plurality of peer nodes are each further configured to cache the particular content and become a content publisher peer node for the particular network (Saulpaugh, [0075], a peer nodes that all can cache the content it receives and publish the content for access by other peer nodes).

23. For claims 5, 13, 21, and 29, the claims are rejected for the same rationale as in claim 2.

24. For claims 14, 22, 23, 30 and 31, the claims are rejected for the same rationale as in claim 3.

25. Claims 8, 9, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saulpaugh and further in view of Leber.

26. For claim 8, Saulpaugh discloses a system, comprising: a plurality of content publisher peer nodes coupled to a network, wherein each of the plurality of content publisher peer nodes is configured to cache user requestable content and to publish the cached contents on the network ([0085], [0074], a node publishing a role, which contains instances associated with the node and also routing information that allows messages to be routed from the node to remote role instances associated with other

nodes, [0069] application data is read as cached content which is identified by a role); a content consumer peer node coupled to the network and configured to:

- send a request for a particular content on the network in response to a user request for the particular content ([0105], a message for a role or content is sent to a set of nodes attached to a single tree by utilizing tree edges, [0082], [0083], [0012], a request for a role (a right to publish instances of that role) followed by granting a role, [0078], client application uses API to manage roles); and

Saulpaugh does not disclose

- receive the particular content from a logically nearest content publisher peer node of the plurality of content publisher peer nodes on the network wherein a logically nearest peer node is a peer node to which communications over the network take the least time.

However, Leber discloses the same (abstract, [0005], [0045] last 5 lines, a peer node probes for actual QoS (delay, bandwidth, packet loss) to each peer that advertises the role and select peers with best QoS qualifications for setting up service)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Saulpaugh and Leber in order to provide peer-to-peer services from the peer where the service is available with best QoS in order to save unnecessary long distance communications costs.

27. For claim 18, the claim is rejected for the same rationale as in claim 8.

28. For claim 9, the claim is rejected for the same rationale as in claim 1.

29. For claim 19, Saulpaugh-Leber discloses the invention as in claim 18. Saulpaugh-Leber further discloses means for the peer node to cache and publish the particular content for access by other peer nodes on the network (Saulpaugh, [0086], [0087], forward a published role to other nodes, fig. 6-8, role instance or content is published from a original node to other nodes).

30. Claims 6, 7, 16, 17, 26, 27, 34, and 35 rejected under 35 U.S.C. 103(a) as being unpatentable over Saulpaugh as applied to claims 1, 12, 20, and 28 above, and further in view of Lehikoinen et al. (US 2004/0260701, hereafter Lehikoinen).

31. For claims 6, 7, 16, 17, 26, 27, 34, and 35, Saulpaugh discloses the invention as in claims 1, 12, 20, and 28 above. Saulpaugh does not explicitly disclose the at least a subset of the plurality of peer nodes are member peers in a peer group, participate in a peer-to-peer networking environment implemented in accordance with one or more peer-to-peer platform protocols for enabling peer nodes to discover each other, communicate with each other, and cooperate with each other to form peer groups and share network resources in the peer-to-peer environment.

However, Lehikoinen discloses the same ([0038], a peer group for file sharing)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Saulpaugh and Lehikoinen in order to provide

various services such as sharing, messaging, and chat and collaboration in a peer group (Lehikoinen, [0029], [0031]).

32. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saulpaugh-Leber as applied to claim 8 above, and further in view of Lehikoinen.

33. For claims 10 and 11, Saulpaugh-Leber discloses the invention as in claim 8 above. Saulpaugh-Leber does not explicitly disclose the plurality of peer nodes are member peers in a peer group, participate in a peer-to-peer networking environment implemented in accordance with one or more peer-to-peer platform protocols for enabling peer nodes to discover each other, communicate with each other, and cooperate with each other to form peer groups and share network resources in the peer-to-peer environment.

However, Lehikoinen discloses the same ([0038], a peer group for file sharing)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Saulpaugh-Leber and Lehikoinen in order to provide various services such as sharing, messaging, and chat and collaboration in a peer group (Lehikoinen, [0029], [0031]).

Conclusion

34. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

35. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hieu T. Hoang whose telephone number is 571-270-1253. The examiner can normally be reached on Monday-Thursday, 8 a.m.-5 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HH

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9/19/7